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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/080,861	05/18/1998	HIROSHI ENDO	1272.6808CI/	9856
5514	7590	05/27/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			LEE, TOMMY D	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2624

DATE MAILED: 05/27/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/080,861

Applicant(s)

ENDO ET AL.

Examiner

Thomas D. Lee

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 10, 2004 has been entered.

***Response to Amendment***

2. This Office action is responsive to applicant's SUPPLEMENTAL AMENDMENT AFTER FINAL REJECTION file April 8, 2004. Claims 13-27 are pending.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 13-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,335,295 (Ferracini et al.) in view of U.S. Patent 4,394,693 (Shirley).

Regarding claims 13-20, Ferracini et al. teach an image processing section comprising: a memory for storing the image data (noting Fig. 3, image buffer 102, line buffer 312 within shrinking module 108 (column 4, lines 26-32)); first processing means for executing image data magnifying processing based on first magnifying rate information (noting Fig. 1, interpolator module 104 (column 3, lines 8-17)); and second processing means for executing the image data magnifying processing for an image



based on the image data magnified by said first processing means, based on second magnifying rate information indicating the magnifying rate greater than or equal to 100% (shrinking module 108 (column 3, lines 30-34), note that the second scaling factor  $G2$  is defined as  $G2 = 1/2^{**}q_x$ ,  $q_x \geq 0$  (column 5, line 35). If  $q_x=0$ , then  $G2=1$  (i.e., equal to 100%), thus satisfying the "greater than or equal to" requirement), wherein the image data magnified by said first processing means is stored in said memory (intermediate image formed by first scaling (column 4, lines 51-55), storage inherently present for providing intermediate image to shrinking module for processing), and said first magnifying rate information is determined based on at least one of a resolution of printing performed by said printing section, an processing load to be borne by said first processing means, a capacity of said memory and a resolution shown by the image data, and a magnification rate of the image based on the image data (magnification rate determined on the basis of a magnification rate of the image to be output based on the image data (column 4, lines 51-60)). Said second magnifying rate information is determined based on said first magnifying rate information and the magnifying rate of the image to be output based on the image data (column 4, lines 61-67). The magnifying rate of the image is a magnifying rate corresponding to a product of a magnifying rate shown by said first magnifying rate information multiplied by a magnification rate shown by said second magnifying rate information (column 4, line 67). Said memory is provided to store the image data magnified by said first processing means (intermediate image inherently stored so that the shrinking operation may be performed on the intermediate image as disclosed at column 5, lines 1-18).

Ferracini et al. do not teach a printing system including a printing section to perform printing on a printing medium (claim 13), wherein said second processing means is provided in the printing section (claim 17), the printing section having a printing apparatus using a printing head to perform printing on the printing medium and the image processing section having an apparatus outputting the image data to the printing apparatus (claim 18), wherein the printing head is an ink jet head ejecting ink onto the printing medium (claim 19), wherein the ink jet head has electro-thermal converting element applying thermal energy to ink to eject the ink by utilizing the thermal energy (claim 20). Shirley teaches a system and method for generating enlarged or reduced images (note Abstract), which is performed on a printing system including a printing section (noting Fig. 1, image reproduction system 39) having a printing apparatus using a printing head (ink jet array 32) to perform printing on the printing medium (paper 34) and the image processing section having an apparatus outputting the image data to the printing apparatus (data output to ink jet control 30). The method may be applied to a thermal picture reproduction system as well (column 3, lines 10-16). Whether processing means for scaling the image is providing in the printing section is a matter of design choice, so long as the processing means is present anywhere between image capture and image reproduction.

One of ordinary skill in the art would have recognized the need to provide a means for magnifying or reducing image data such as taught by Ferracini et al. in an ink jet or thermal printer, since magnification and reduction are features in general are well-known features in such printers. Therefore, applying the method of scaling images as

taught by Ferracini et al. in an ink jet or thermal printer would have been an obvious modification to one of ordinary skill in the art.

Claims 21-27 are method claims corresponding to system claims 13-19, respectively, and thus are rejected for the reasons mentioned above, as the method steps are performed by the elements found in the combined teachings of Ferracini et al. and Shirley.

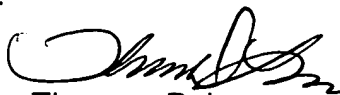
### ***Response to Arguments***

5. Applicant's arguments filed with regard to independent claims 13 and 21 as set forth on page 7 of the supplemental amendment filed April 8, 2004 have been fully considered but they are not persuasive. Applicant asserts that the shrinking module disclosed in Ferracini et al. only provides reduction. However, as mentioned above, the second scaling factor  $G2$  associated with Ferracini's shrinking module is defined as  $G2 = 1/2^{**}q_x$ ,  $q_x \geq 0$  (column 5, line 35). If  $q_x=0$ , then  $G2=1$ . This corresponds to a magnification rate equal to 100%. Applicant's claims recite a magnification rate "greater than *or equal to* 100%," and thus this limitation reads on Ferracini's shrinking module.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas D. Lee  
Primary Examiner  
Art Unit 2624

tdl  
May 26, 2004